

## ABSTRACT

Counter control section 101 increments a row number and column number on a two-dimensional array for a block  
5 interleave expressed by a matrix two-dimensional array, outputs the incremented numbers as the read address values, bit inversion apparatus 102 performs bit inversion using the read address values as inputs, column conversion apparatus 103 outputs the address values  
10 corresponding to the bit inversion output values and the column numbers from counter control section 101 as the column conversion values, shift register 104 bit-shifts the output values of bit inversion apparatus 102 and outputs as the address offset values, adder 106 adds up  
15 the address offset values and column conversion values and size comparison section 106 compares the addition value with the interleave size and outputs data which is not greater than the interleave size as address values.